

We Claim:

1. A method for remediating manure-contaminated material which comprises:

5 a. providing a mass of manure-contaminated material including in situ-formed bacteria and nitrogen-containing materials;

b. acidifying said mass of manure-contaminated material to a pH of not more than about 7.0 without destroying a substantial portion of said active bacteria and/or without liberating a substantial portion of said nitrogen-containing
10 materials;

c. particularizing said acidified manure-contaminated material; and

d. treating said particularized, acidified manure-contaminated material with at least one chemical amendment to form a treated particularized manure-contaminated material.

15 2. The method of claim 1, wherein acidifying of said mass of manure-contaminated material comprises neutralization.

3. The method of claim 1, wherein the mass of manure-contaminated material is acidified with sulfuric acid and/or phosphoric acid and/or citric acid.

20 4. The method of claim 1, wherein the step of particularizing comprises microenfractionating the mass of manure-contaminated material.

5. The method of claim 1, wherein said chemical amendment comprises at least one nutrient.

6. The method of claim 1, wherein the treated particularized manure-contaminated material comprises a fertilizer.

25 7. The method of claim 1, wherein the acidified manure-contaminated material is entrained in an air stream during the particularizing step.

8. The method of claim 1, wherein the acidified manure-contaminated material is entrained in a vortex-type air stream which transports the entrained treated contaminated material in a generally circular path.

30 9. The method of claim 1, wherein the particularizing step comprises homogenizing and aerating the acidified manure-contaminated material.

10. The method of claim 1, wherein the step of particularizing the treated particularized manure-contaminated material increases the surface area of said mass of manure-contaminated material by a factor of at least about 1×10^6 .

5 11. The method of claim 1, which further includes the step of discharging the microenfractionated treated contaminated material from the air stream and redistributing it throughout a soil matrix thereby substantially increasing the surface area of the soil matrix.

10 12. The method of claim 1, where the chemical amendment comprises a liquid solution.

13. A method for remediating manure-contaminated material which comprises:

15 d. providing a mass of manure-contaminated material including in situ-formed bacteria and nitrogen-containing materials;

15 e. acidifying said mass of manure-contaminated material to a pH of not more than about 7.0 without destroying a substantial portion of said active bacteria and/or without liberating a substantial portion of said nitrogen-containing materials;

20 f. microenfractionating said acidified manure-contaminated material; and
20 d. treating said microenfractionated, acidified manure-contaminated material with at least one nutrient to form a treated microenfractionated manure-contaminated material.

14. The method of claim 13, wherein acidifying of said mass of manure-contaminated material comprises neutralization.

25 15. The method of claim 13, wherein the mass of manure-contaminated material is acidified with sulfuric acid and/or phosphoric acid and/or citric acid.

16. The method of claim 13, wherein the step of particularizing comprises microenfractionating the mass of manure-contaminated material.

30 17. The method of claim 13, wherein said chemical amendment comprises at least one nutrient.

18. The method of claim 13, wherein the treated particularized manure-contaminated material comprises a fertilizer.

19. The method of claim 13, wherein the acidified manure-contaminated material is entrained in an air stream during the particularizing step.

5 20. The method of claim 13, wherein the acidified manure-contaminated material is entrained in a vortex-type air stream which transports the entrained treated contaminated material in a generally circular path.

21. The method of claim 13, wherein the particularizing step comprises homogenizing and aerating the acidified manure-contaminated material.

10 22. The method of claim 13, wherein the step of particularizing the treated particularized manure-contaminated material increases the surface area of said mass of manure-contaminated material by a factor of at least about 1×10^6 .

23. The method of claim 13, which further includes the step of
15 discharging the microenfractionated treated contaminated material from the air stream and redistributing it throughout a soil matrix thereby substantially increasing the surface area of the soil matrix.

24. The method of claim 13, where the chemical amendment comprises a liquid solution.

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